UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/529,431	03/25/2005	Gregoire Prevost	117P/PCT2/US	6671

7590 11/30/2007

Brian R Morrill
Biomeasure Incorporated
27 Maple Street
Milford, MA 01757-3650

EXAMINER	
OLSON, ERIC	

ART UNIT	PAPER NUMBER
1623	

MAIL DATE	DELIVERY MODE
11/30/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/529,431	PREVOST ET AL.	
	Examiner	Art Unit	
	Eric S. Olson	1623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 September 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *17-19,22,26,31 and 32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *17-19,22,26,31 and 32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Detailed Action

This office action is a response to applicant's communication submitted September 26, 2007 wherein claims 17, 22, and 26 are amended and claims 2-16, 20, 21, 30, 33, 34, and 38 are cancelled. This application is a national stage application of PCT/IB03/04922, filed September 29, 2003, which claims benefit of provisional application 60/414103, filed September 27, 2002.

Claims 17-19, 26, 31, and 32 are pending in this application.

Claims 17-19, 26, 31, and 32 as amended are examined on the merits herein.

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 26, 2007 has been entered.

The following rejections of record in the previous office action are maintained:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gordon et al. (PCT international publication WO00/39130, of record in the previous office action) in view of Rybak. (PCT international publication WO01/64197, of record in the previous office action) Gordon et al. discloses a pharmaceutical composition comprising one of a variety of compounds having an identical formula to formula (I) recited in instant claim 2. (pp. 2-9) Further specifically recited embodiments include the farnesyl transferase inhibitors of instant claims 3-17. (pp. 17-27) These compounds are disclosed to possess anti-tumor activity (p. 16, lines 16-29) and to be useful for inhibiting prenyl transferases including farnesyl transferase. (p. 9, lines 8-25) Gordon et al. does not disclose a pharmaceutical composition comprising a combination of compound according to structure (I) and an anthracycline, or a method of treating nasopharyngeal cancer by administering such a composition to a subject. Gordon et al. also does not disclose a pharmaceutical kit comprising such a composition according to instant claims 34 and 38.

Rybak discloses therapeutic combinations of anthracyclines and farnesyl transferase inhibitors which are effective in the inhibition of tumor cell growth. (p. 13, lines 3-6) Preferred anthracycline derivatives include daunorubicin, doxorubicin, and idarubicin. (p. 21, lines 24-26) These compositions may be used in a method of inhibiting abnormal cell growth or treating various cancers having aberrant or mutated *ras* oncogene, (p. 22, lines 12-38) in a mammal, particularly a human. The two

components may be administered either simultaneously or sequentially. (p. 23, lines 16-18)

It would have been obvious to one of ordinary skill in the art at the time of the invention to produce a pharmaceutical composition comprising a farnesyl transferase inhibitor according to Gordon et al. and further comprising an anthracycline such as doxorubicin. One of ordinary skill in the art would have been motivated to combine the two components and to administer them to a patient suffering from cancer because both components were known to be useful for the treatment of cancer. One of ordinary skill in the art would have reasonably expected success because both compounds were known to be useful for the same purpose. It has been held that it is *prima facie* obvious to combine two compositions, each of which is taught by the prior art to be useful for the same purpose in order to practice a third composition for the very same purpose. The idea of combining them flows logically from their having been taught individually in the prior art. See *In re Kerkhoven*, 205 USPQ 1069, CCPA 1980.

Thus the invention taken as a whole is *prima facie* obvious.

Response to Argument: Applicant's arguments, submitted September 26, 2007, with respect to the above ground of rejection, have been fully considered and not found to be persuasive to remove the rejection. Applicant argues that neither reference teaches the specific combination of a farnesyl transferase inhibitor and an anthracycline that is recited in the instant claims. However, as discussed above, the prior art does in fact teach a combination of different farnesyl transferase inhibitors with anthracyclines, and the further step of substituting the compound of Gordon et al. for the similar FTIs of

Rybak is not a patentable distinction. The prior art does not need to explicitly teach every limitation to the claimed invention in one reference for the invention to be obvious under 35 USC 103. Rather the art must merely suggest the usefulness of the claimed combination. In the instant case, it is already known that it is advantageous to combine a farnesyl transferase inhibitor and an anthracycline. The only element missing is the specific farnesyl transferase inhibitor invented by Gordon et al. and further claimed by the instant application. One of ordinary skill in the art would have expected this farnesyl transferase inhibitor to be at least as effective as the farnesyl transferase inhibitors used in the invention of Rybak et al., because it has the same function *in vivo*, namely inhibition of the enzyme farnesyl transferase.

Applicant further claims that Gordon fails to recite the farnesyl transferase inhibitor of claim 17. This inhibitor is taught on p. 26 of Gordon as compound 39. This compound is explicitly taught by Gordon as being an inhibitor of farnesyl transferase, and that it is useful for the treatment of cancer.

Applicant further claims that the cited references do not teach or suggest using the claimed compounds to treat nasopharyngeal carcinoma. However, this rejection is no longer applied to any claims concerning treatment of nasopharyngeal carcinoma, (instant claims 22, 26, 31, and 32) but rather to claims concerning a pharmaceutical composition. (instant claims 17-19) Expectation of treating any particular type of cancer (for example those disclosed on pp. 22-23 of Rybak) is sufficient motivation to practice the claimed invention.

Finally, Applicant claims that the references fail to provide data that the claimed combination confers an anti-tumor effect, compared with data provided by Applicant that allegedly indicates that the combination provides a greater effect than either compound alone. Firstly, one of ordinary skill in the art would reasonably expect an additive effect for the combination of two known antitumor agents, such as an anthracycline and a farnesyl transferase inhibitor, particularly in the cancer art where combination therapies are the standard of treatment. Secondly, the obviousness of combining a FT inhibitor and an anthracycline is not at issue, as this combination is already explicitly taught by Rybak. If a particular combination (e.g. a FT inhibitor and an anthracycline) is already known in the prior art, evidence of unexpected results does not render it patentable. The only element that is not taught in the prior art is the specific combination of the FT inhibitor of example 39 of Gordon with an anthracycline. Applicant fails to show that combining this specific inhibitor with an anthracycline produces an unexpectedly greater result **compared with the combination of other FT inhibitors with an anthracycline**, such as the combinations taught by Rybak. The data identified by Applicant do not indicate that there is anything special about this particular compound compared to other FT inhibitors.

For these reasons the rejection is maintained.

The following new grounds of rejection are introduced:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 22, 26, 31, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gordon et al. (PCT international publication WO00/39130, of record in the previous office action) in view of Rybak. (PCT international publication WO01/64197, of record in the previous office action) as applied to claims 17-19 above, and further in view of Porter et al. (Reference included with PTO-892) The disclosure of Gordon et al. in view of Rybak is discussed above. Gordon et al. in view of Rybak does not disclose a method of treating nasopharyngeal carcinoma in particular.

Porter et al. discloses a study of the expression of certain oncogenes in nasopharyngeal carcinoma. (p. 105, left column, paragraphs 2-3) 73% of nasopharyngeal carcnomas studies were seen to have moderate or intense *ras* expression. (p. 106, right column, table I)

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the compositions and methods of Gordon et al. in view of Rybak to treat nasopharyngeal carcinomas such as those of Porter et al. that express the *ras* oncogene. One of ordinary skill in the art would have been motivated to treat these cancers because Rybak already discloses that the combination of a FT inhibitor and an anthracycline is useful for treating cancers that express the *ras* oncogene, and Porter et

al. discloses that many nasopharyngeal carcinomas fall within this category. One of ordinary skill in the art would reasonably have expected success because testing a tumor to determine whether a particular oncogene is expressed is well within the ordinary and routine level of skill in the art.

Therefore the invention taken as a whole is *prima facie* obvious.

Conclusion

No claims are allowed in this application.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric S. Olson whose telephone number is 571-272-9051. The examiner can normally be reached on Monday-Friday, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shaojia Anna Jiang can be reached on (571)272-0627. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Eric Olson
Patent Examiner
AU 1623
11/27/07

Anna Jiang
Supervisory Patent Examiner
AU 1623